

weed, *Champia parvula* Harv., and established the interesting fact that there are five cells at the apex of the frond, instead of one as is usual in other plants. The paper will be published in the Proceedings of the American Academy.

Dr. Britton's paper has already appeared in the August number of the *Bulletin of the Torrey Club*. It dealt with the correspondence of the floral and lithological features in certain parts of New Jersey, especially the occurrence on the Kittatinny mountains of plants whose ordinary habitat is in the sandy soil near the sea-shore. The paper was commended by Prof. T. C. Porter, who spoke of his own studies in the same line, which he hoped to publish after a time.

In the absence of Prof. Coulter his paper on Umbellifer fruits was read by Dr. Beal. The paper did not admit of discussion on account of its technical character; it will be published in this journal.

Dr. Farlow spoke of the confusion which has arisen regarding the apical growth in *Fucus*, illustrating his remarks with blackboard sketches. Investigators have been inclined to think that the growth proceeded from more than one apical cell. This was shown to be untrue, and what does take place was explained, together with the reasons that led other observers to different views.

The outline of Dr. Newberry's remarks on the flora of the Amboy clays was published some time since in the *Bulletin of the Torrey Club*.

The two papers on the honey plant were read for the authors. The plant, *Echinops sphærocephalus*, thistle-like in appearance, growing four to five feet high, has been discovered to be of more than usual value for bees. It is hardy at Buffalo, N. Y. The seeds, about the size and form of rye, yield more oil than linseed, being as much as four and a half ounces to the pound when crudely expressed. The residue left after removing the oil is very bitter like quinine, but the active principle has not been examined. Samples of the plant and its products were exhibited. The paper was discussed by Messrs. Morong, Britton, Claypole, and Mrs. Wolcott, especially as to the literature of the subject and the possibility of the plant becoming a troublesome weed if allowed to escape from cultivation.

Dr. Schrenk's paper on the minute structure of *Brasenia* was a long and able account of an interesting investigation. It was illustrated by growing plants, sections under the microscope, and enlarged drawings.

**Proterogyny in *Datura meteloides*.**—I have been cultivating this species for ornament, and by accident discovered the peculiar way in which the stigma is in a position in which it may be fertilized before the pollen of its own flower is shed.

As is well known the corolla, in æstivation, is plicate-convolute or supervolute, and opens in the evening twilight and begins to close and droop shortly after sunrise the following morning. From twenty-



four to thirty-six hours before the corolla opens the stigma begins to peep out through the center of the convoluted folds. It gradually protrudes farther until during the last afternoon it is from one-half to three-fourths inch beyond the highest point of the closed corolla. It is thus ready to be fertilized by the pollen of the flowers that are open the evening before its own opens. I have examined the other two species of *Datura* that grow here, but find no such contrivance for cross-fertilization.

J. SCHNECK, *Mt. Carmel, Ill.*, Aug. 22, 1887.

**Entertainment of the Botanists in New York.**—Nothing that could reasonably have been done to add to the profitable enjoyment of the botanists of the Association during its August meeting was omitted, and the execution of the carefully devised plans was accomplished without break. This result was brought about by the efforts of the Torrey Botanical Club, and thanks are due to no individuals more than to Dr. and Mrs. Britton.

Upon arrival the botanists found a room set apart for the Club, where they registered, and received their distinctive badges of yellow silk and a programme of the botanical announcements for the week.

A reception by the Torrey Club was given the Club of the Association on Friday evening in the commodious hall of the Columbia Library, which afforded a good opportunity for the exchange of courtesies and the renewal and promotion of acquaintanceship. A rich collation added to the pleasure of the evening.

No feature of the whole meeting was more enjoyable than the excursion to Sandy Hook, which took place Monday afternoon, and in which the entomologists joined with the botanists. Morning showers and a lowering sky threatened to repeat the Point Abino experience of last year; but the sky, the atmosphere and the temperature combined in really producing the most admirable of weather. A trim and cozy harbor steamer, well supplied with refreshments, made the hour's ride especially comfortable.

Sandy Hook is a low stretch of sandy sea-coast, with a rather meager flora of grass and herbaceous plants, with clumps of shrubs and low trees, and still fewer representatives of mosses, algæ, lichens and fungi. The locality was chiefly interesting for its peculiar sea-side character, and was in marked contrast to the rich and varied floras of the localities the club has usually visited. Among the plants which excited the most interest were the beach plum, *Prunus pumila*, with its black knot fungus; *Senecio cineraria*, the dusty miller of the gardens, with the habit of a native plant; a broad-jointed *Opuntia*, and the beautiful flowers of a *Sabbatia*, among the higher plants. Among lower plants, the abundance of a smut on the inflorescence of *Cyperus Grayi* attracted attention; a lichen gave a carpet-like growth upon the sandy soil in some places, and a single *Geaster* stood for the larger fungi.